



STREAMS



[Kitsap County Code](#) (KCC) Title 19 [Critical Areas Ordinance](#) (CAO) regulates development affecting wetlands, fish and wildlife habitat conservation areas, streams, aquifer recharge areas, and frequently flooded and geologically hazardous areas. This fact sheet is one in a series describing these environmentally critical areas; it is general information and is not intended as a substitute for actual codes and regulations.

What is a stream?

A stream is an area where surface water flow is sufficient to produce a defined channel or bed. Such areas demonstrate evidence of the passage of water and include, but aren't limited to, bedrock channels, gravel beds, sand and silt beds, and defined-channel swales. The channel or bed need not contain water throughout the year to be considered a stream.



This definition is not meant to include designated irrigation ditches, canals, storm or surface water runoff infrastructure or other artificial water courses, unless used by salmon, or unless it was a natural stream or wetland that was straightened, ditched, or relocated in the past for construction, development, agriculture drainages or other purposes.

Why are streams important?

Streams benefit the environmental, cultural, and economic well-being of Kitsap County. Streams provide numerous values and functions, such as:

- Maintaining water quality.
- Storing and conveying stormwater and floodwater.
- Recharging groundwater.
- Providing important fish and wildlife habitat and food, both in stream and within their corridors.
- Offering areas for cultural practices and traditions, recreation, education, scientific study, and aesthetic appreciation.

Stream Classification

Throughout the state, water bodies (including stream segments) are classified by the Department of Natural Resources (DNR) based on flow volume and importance to fish and wildlife, domestic use, and public recreation. There are four stream classifications in Kitsap County:

Type S – *Shoreline*

Type F – *Fish Habitat*

Type NP – *Non-Fish Habitat Perennial*

Type NS – *Non-Fish Habitat Seasonal*

Type S waters include streams that have the largest flow volumes (20 cubic feet per second or greater), such as segments of Big Beef, Blackjack, Burley, and Chico Creeks. These segments are regulated by KCC Title 22, the [Shoreline Master Program](#).

Type F streams meet physical criteria needed to provide fish habitat and may or may not be physically occupied by fish, depending on the presence of manmade barriers to fish passage. Type F streams can have perennial or seasonal flow. Fish, such as juvenile salmon and trout, use small stream channels and wetlands with winter flow to seek seasonal refuge, even if those channels go dry for part of the year. Adult salmon spawning habitat, which often resembles a typical stream channel, can look much different than juvenile salmon rearing habitat, which consists of low energy wetlands, ponds, and side channels, as well as estuaries.

Type NP and **Type NS** streams tend to be very small, very steep, or significantly isolated/disconnected streams that do not meet physical criteria needed to provide fish habitat.

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How does development impact streams?

Unless properly located, planned, and designed, development can degrade a stream's habitat and water quality, undermining its values and functions. Poorly planned and designed development can:

- Increase stormwater runoff and flooding, delivering unnatural amounts of sediment to the stream and reducing the light and oxygen necessary for plant and animal life.
- Contribute toxic chemicals and organic pollutants.
- Remove streamside vegetation crucial to maintaining water temperature, bank stabilization and pollutant filtering capabilities.
- Reduce channel complexity, habitat structure, and floodplain connection.

Buffers and Building Setbacks

Buffers are areas surrounding streams or other critical areas, intended to protect ecological functions and values. No clearing or grading is allowed within this buffer. In addition, structures and impervious surfaces must be kept outside a 15-ft building setback that extends beyond the buffer. In most cases, *existing* structures within a stream buffer may be remodeled, reconstructed, or replaced (with certain limitations on the new footprint and size).

Standard buffer width requirements depend on the stream type. These are minimum requirements and may be increased to protect a stream:

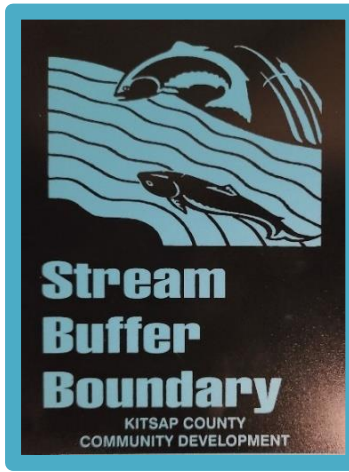
Type S – 200 ft

Type F – 150 ft

Type NP – 50 ft

Type NS – 50 ft

Buffers begin at the “ordinary high water mark” (OHWM) of the stream channel and are measured perpendicular to the stream channel in either direction. The OHWM is typically placed at a visible line found on the stream bank, which is the average extent of high water. When the line is not visible, the OHWM may be placed at the top of the bank, or where the vegetation changes to an upland type.



Other Buffer Considerations

For streams with ravine sides 10 ft or greater in height, the minimum buffer width must be the minimum buffer required for the stream type, or a buffer width which extends 25 ft beyond the top of the slope, whichever is greater.

Buffer widths are increased if there are streamside wetlands that provide overflow flood storage. Wetlands feed water back to the stream during low flows and provide shelter and food for fish. In consultation with the

Washington Department of Fish and Wildlife (WDFW), Kitsap County has the flexibility to reduce buffers on existing platted lots, but not during a land division process.

Alteration of a stream or its buffer may require a mitigation plan with the County that results in no net loss of ecological functions. A plan must include project-specific criteria for monitoring the mitigation site to help the County evaluate whether mitigation has succeeded. Sites are monitored for a minimum of five years and up to ten years. The applicant must also meet the requirements of other jurisdictions, such as WDFW's Hydraulic Project Approval (HPA).

See the [Critical Area and Shoreline Protection and Monitoring](#) brochure for more information about mitigation plans and monitoring requirements.

Stream Crossings

Very specific design standards exist for water crossings on Type S and Type F streams that provide fish passage and restore or maintain the natural stream processes necessary to build and maintain habitat. The [WDFW Water Crossing Design Guidelines](#) provide engineering standards for water crossings. To maintain fish passage and stream processes, bridges or bottomless culverts are required for all Type S and F streams, which support salmonids, unless it can be demonstrated to the County that impacts to salmon habitat can be mitigated.

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Stream crossings on Type NP and NS streams must be designed to pass expected flow, sediment, and natural debris. Permits, including an HPA from WDFW, are required for crossings on streams, regardless of stream type. To obtain a stream crossing permit (HPA) contact your local WDFW [Habitat Biologist](#).

Fish Passage Barriers

Many existing stream crossings (such as bridges and culverts) are too small to accommodate flow, sediment, and organic debris while also maintaining passage for fish and natural stream processes. As such, many stream crossing structures have become fish passage barriers and degrade stream habitat both up- and downstream. In Washington, it is typically unlawful to maintain a barrier to fish passage on one's property. More information on fish passage barriers is available on the WDFW [website](#).

Existing water crossings that do not meet the standards in the Water Crossing Design Guidelines must be upgraded to meet the guidelines at the end of their structural life or when any modification to that crossing is proposed. In other words, undersized water crossings are generally not exempted as legacy structures.

Streams in livestock areas

In areas that would allow livestock to access stream damage should be avoided by:

- Fencing along a stream's outer buffer edge.
- Implementing to the satisfaction of the Kitsap Conservation District a [farm resource conservation and management plan](#) that would protect and enhance stream quality.

Other Restrictions and Provisions

Examples of activities that are subject to the standards contained in the CAO and other applicable federal, state, and local ordinances include:

- All timber harvesting and associated development activity.
- Land division and land use permits.
- Road construction.
- Trails and trail-related facilities.

How do I verify or change a mapped stream?

Maps used by County planners to locate streams and other water features are primarily created and managed by the state Department of Natural Resources (DNR). These maps are not always accurate and can differ from conditions on the ground. Streams and wetlands are regulated by the Critical Areas Ordinance, regardless of whether they appear on official maps. DCD planners aim to err on the side of caution and raise concern about any features that indicate water may be present.

A site inspection may be necessary to verify or determine stream classification and exact location; this is initiated by the landowner, coordinated by the County, and could include representatives from WDFW, DNR, the Department of Ecology, and any affected Tribes. This may entail additional fees. If the final determination is different from what is on existing maps, the County will submit a change form ([Water Type Modification](#)) to DNR.

Streams on forest land

If a stream is located on forest land, DNR will be the lead for any change requests, rather than the County, and the change form can be submitted directly to DNR. The verification process is similar when DNR is the lead agency.

DNR Resources

[Water Type Modification Form Instructions](#)
[Water Type Modification Form](#)
[Water Typing on Non-Forest Lands](#)

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